

Notice of Allowability

Application No.

09/895,478

Examiner

Jennifer M. Dolan

Applicant(s)

HARDEN ET AL.

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amdt. of 10/27/05.
2. ☒ The allowed claim(s) is/are 1, 2, and 4-7.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 9/10/01; 5/30/02; 6/17/02
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


CARL WHITEHEAD, JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

DETAILED ACTION

Election/Restrictions

1. This application is in condition for allowance except for the presence of claims 8-12 directed to an invention non-elected without traverse. Accordingly, claims 8-12 have been cancelled.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

Claims 8-12 have been cancelled.

Allowable Subject Matter

3. Claims 1, 2, and 4-7 are allowed.

4. The Examiner notes the Applicant's explanation of how the specifically claimed leadframe geometry allows for both a reduced footprint as well as a reduced height package in the Applicant's remarks filed on 10/27/05. The Examiner generally agrees with the Applicant's arguments, and offers the following remarks on reasons for allowance:

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The primary reason for allowance is that the prior art provides insufficient motivation for combining the features of disposing the die and the bonding wires on the bottom side of a leadframe diepad for a package having all of the geometric constraints recited in claim 1, such as having the leads folding underneath the package in the claimed manner.

The closest prior art of record is Japanese Patent Publication 59-161851 to Yoshida, which teaches a package having the leads folded underneath the package in the manner claimed. Yoshida, however, as well as other similar prior art, provides the die and the bonding wires on the top side of the leadframe, such that a thick portion of the package is present on the top of the leadframe to enclose the die and the bonding wires, as well as on the bottom of the leadframe, in order to accommodate the leads folding under the package body.

Although disposition of both the die and the bonding wires on either the top side of the leadframe or the bottom side is well known and well-established in the art (see, for example, JP 62-117355 to Komatsu et al. or US 5,508,557 to Sunada), the prior art provides no motivation for using such a configuration with the claimed lead geometry, but rather, the prior art simply presents such alternate configurations as art-recognized equivalents or alternate design choices. Since the claimed combination of the leadframe geometry and the die and bonding wire positioning leads to a reduction in the height of the package over similar, small footprint prior art packages, (such as Yoshida), the Examiner concedes that the die-over leadframe and die-under leadframe type configurations, as in Komatsu, cannot reasonably be considered art equivalents or mere design choices when applied to a reduced footprint package, as in Yoshida, and thus the prior art does not provide sufficient motivation to combine all of the claimed elements.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer M. Dolan whose telephone number is (571) 272-1690. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl W. Whitehead, Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer M. Dolan
Examiner
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